

Please amend Claim 6 as follows:

G<sup>2</sup> 6. (Twice amended) A composition as claimed in claim 1, wherein said stabilizing entities are provided as a solution.

Please amend Claim 10 as follows:

G<sup>3</sup> 10. (Twice amended) The composition as claimed in claim 6, wherein said stabilizing entities are a solution of tetrapropyl orthosilicate.

Please amend Claim 13 as follows:

13. (Twice amended) A process for making the composition of Claim 1, said process comprising:

G<sup>4</sup> doping and mixing a hydroxyapatite substance with a composition of stabilizing entities to uniformly distribute said stabilizing entities throughout said entire hydroxyapatite substance; and sintering said uniformly doped hydroxyapatite substance; wherein sintering converts at least a portion of said uniformly doped hydroxyapatite substance into primarily alpha tricalcium phosphate.

✓  
Please cancel Claims 14 and 15.

✓  
Please cancel Claims 19 - 21.

Please amend Claims 22 and 23 as follows.

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22. (Once amended) The process of claim 13, wherein sintering is done at temperatures of about 900°C to 1100°C.

23. (Once amended) The composition of claim 1, where said composition is provided as a microporous polycrystalline structure.

✓  
Please cancel Claim 24.

Please amend Claims 25 - 27 as follows:

G6

25. (Three times amended) The composition of claim 23, wherein said structure has said globular morphology of Figure 14.

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26. (Once amended) The composition of claim 25, wherein said morphology comprises rounded granules with a lateral dimension of about 0.5 to 1 μm.

G8

27. (Three times amended) An implantable calcified bone matrix comprising:  
a) the composition of claim 1 forming a structure for supporting said bone matrix;  
and  
b) a calcified bone matrix secreted by osteoblasts on said structure.

✓  
Please cancel Claims 30 and 31.

Please amend Claims 32, 33, 35, 37, and 38 as follows:

69 32. (Once amended) The composition of claim 23, wherein said composition has an internal macroporosity.

33. (Once amended) An implantable device comprising the composition of claim 1.

G10 35. (Twice amended) A method for the culturing of functional bone cells, said method comprising:  
applying a suspension of bone cells in physiological media to the composition of claim 1 provided as a substrate.

37. (Twice amended) A method for the *ex vivo* engineering of a mineralized collagenous implant, the method comprising the steps of:

- G11
- a) providing the composition of claim 1 as a bulk material;
  - b) applying a suspension of osteoblasts on said composition and incubating for a time sufficient for said osteoblasts to secrete mineralized collagenous bone matrix on said bulk material; and
  - c) implanting the product of step (b) in a patient.

G12 38. (Once amended) The composition of claim 1, wherein said stabilizing entities are silicon.

✓  
Please cancel Claims 39 - 46.